Tomorrow, we will celebrate the close of our second class of 10th district laureates. Our focus was on "mini-medical school," with 24 gifted 7th graders exploring topics from research to emergency care to open heart surgery.

Our kids benefit from a scientific, intellectual tradition that took hold of the West in the 16th century. While the benefits of the scientific method are obvious, basic values behind research are attacked in each generation. That is why I was so passionate about the promise of stem cell research and won House approval of the Stem Cell bill (H.R. 810).

Recently, some people tried to revive the doctrine of creationism, left for dead after Chicago's own Clarence Darrow destoyed it at the Scopes "Monkey Trial." The rebranding of creationism is called "Intelligent Design." It appears to be neither.

We come from communities where thousands of families earn their living on medical research. Their children, steeped in this tradition, deserve the best education for their future.

Recently, I asked the head of the National Science Foundation (NSF) to review creationism. I felt an official NSF report would help school boards to put creationism back in the history books where it belonged.

Holden Thorp, the Chair of the University of North Carolina's chemistry department, said it best in today's New York Times. Professor Thorp noted that the theory of evolution lead us to develop Remicade to fight inflammation, Herceptin to fight breast cancer and other life saving medicine. Creationism did not.

Read Professor Thorp's piece below:

Evolution's Bottom Line

By HOLDEN THORP

Chapel Hill, N.C.

THE usefulness of scientific theories, like those on gravity, relativity and evolution, is to make predictions. When theories make practicable foresight possible, they are widely accepted and used to make all of the new things that we enjoy — like global positioning systems, which rely on the theories of relativity, and the satellites that make them possible, which are placed in their orbits thanks to the good old theory of gravity.

Creationists who oppose the teaching of evolution as the predominant theory of biology contend that alternatives should be part of the curriculum because evolution is "just a theory," but they never attack mere theories of gravity and relativity in the same way. The creationists took it on their intelligently designed chins recently from a judge in Pennsylvania who found that teaching alternatives to evolution amounted to the teaching of religion. They prevailed, however, in Kansas, where the school board changed the definition of science to accommodate the teaching of intelligent design.

Both sides say they are fighting for lofty goals and defending the truth. But lost in all this truth-defending are more pragmatic issues that have to do with the young people whose educations are at stake here and this pesky fact: creationism has no commercial application. Evolution does.

Since evolution has been the dominant theory of biology for more than a century, it's a safe statement that all of the wonderful innovations in medicine and agriculture that we derive from biological research stem from the theory of evolution. Recent, exciting examples are humanized antibodies like Remicade for inflammation and Herceptin for breast cancer, both initially made in mice. Without our knowledge of the evolution of mice and humans and their immune systems, we wouldn't have such life-saving and life-improving technologies.

Another specific example is resistant bacterial infections, one of the scariest threats to public health. The ones that are resistant to antibiotics are more reproductively successful than their non-resistant relatives and pass the new resistance genes on to more offspring. Just as Darwin said 150 years ago.

The creationists have devised a tortuous work-around for this phenomenon, which endorses natural selection and survival of the fittest, but says that evolution doesn't explain the original development of species. The problem is, there are hundreds of genes that occur in both

bacteria and humans. It's hard to see why a designer would do it that way, since having the same genes in bacteria and humans makes infections harder to treat: drugs that act on bacterial gene products act on the human versions as well, so those drugs could kill both the bacterium and the human host. Talk about throwing the baby out with the bathwater.

So evolution has some pretty exciting applications (like food), and I'm guessing most people would prefer antibiotics developed by someone who knows the evolutionary relationship of humans and bacteria. What does this mean for the young people who go to school in Kansas? Are we going to close them out from working in the life sciences? And what about companies in Kansas that want to attract scientists to work there? Will Mom or Dad Scientist want to live somewhere where their children are less likely to learn evolution?

One Kansas biology teacher, a past president of the National Association of Biology Teachers, told Popular Science magazine that students from Kansas now face tougher scrutiny when seeking admission to medical schools. And companies seeking to innovate in the life sciences could perhaps be excused for giving the Sunflower State a miss: one Web site that lists companies looking for workers in biotechnology has more than 600 hiring scientists in California and more than 240 in Massachusetts. Kansas has 11.

In his most recent State of the Union address, President Bush mentioned our problems in science education and promised to focus on "keeping America competitive" by increasing the budget for research and spending money to get more science teachers. I hope he delivers, but we can't keep America competitive if some states teach science that has no commercial utility. Those smart youngsters in India and China whom you keep hearing about are learning secular science, not biblical literalism.

The battle is about more than which truth is truthier, it's about who will be allowed to innovate and where they will do it. Sequestering our scientists in California and Massachusetts makes no sense. We need to allow everyone to participate and increase the chance of finding the innovations to improve society and compete globally.

Where science gets done is where wealth gets created, so places that decide to put stickers on their textbooks or change the definition of science have decided, perhaps unknowingly, not to go to the innovation party of the future. Maybe that's fine for the grownups who'd rather stay home, but it seems like a raw deal for the 14-year-old girl in Topeka who might have gone on to find a cure for resistant infections if only she had been taught evolution in high school.

Holden Thorp is chairman of the chemistry department at the University of North Carolina.